

What is claimed is:

1. A method for connecting a client device and a server, the method implemented on an Internet connection system which comprises the client device, a relay device, and the server, the server being connected to the Internet and also to the client device through the relay device and the Internet, comprising the steps of:

(a) notifying the relay device of an IP address of the server;

(b) enabling the relay device to establish a TCP/IP session by means of a tunneling connection between the relay device and the server by use of the IP address;

and

(c) enabling the relay device to route communications via the TCP/IP session from the server to the client device.

2. The method of Claim 1, wherein

the relay device is each installed in each client device.

3. The method of Claim 1, wherein

in the step (a), the relay device connects to a tunneling broker server provided on the Internet, and receives the IP address of the server from the tunneling broker server.

4. The method of Claim 1, wherein

the step (b) comprises the steps of:

(b-1) enabling the relay device to connect to the server by use of the IP address of the server;

(b-2) enabling the server to notify the relay device of an IP address of the relay device for establishing the TCP/IP session by means of the tunneling connection; and

(b-3) establishing the TCP/IP session by means of the tunneling connection between the server and the relay device.

5. The method of Claim 4, wherein

5 the step (b-1) comprises the step of enabling the server to perform connection authentication for the relay device; and

the step (b-2) comprises the step of generating the IP address of the relay device depending on a result of the connection authentication.

10 6. A network-enabled home appliance, comprising:

a control section for receiving a packet, the packet including a predetermined command, and controlling the network-enabled home appliance based on the command;

a server address storage section for storing a global address of a server located on the Internet;

15 a tunneling establishing section for establishing a tunneling connection between the network-enabled home appliance and the server based on the global address of the server; and

a packet processing device for capsulating/decapsulating packets, the packets communicated with the server through the tunneling connection, and routing the packets
20 to the control section or the server.

7. The network-enabled home appliance of Claim 6, further comprising:

a broker server address storage section for storing an address of a tunneling broker server located on the Internet; and

25 a server address obtaining section for accessing the tunneling broker server based on the address of the tunneling broker server, and receiving the global address of the server from the tunneling broker server.

8. A server used on an Internet connection system which comprises a client device, a relay device, and the server, the server being connected to Internet and also to the client device through the relay device and the Internet, comprising:

5 a tunneling establishing section for establishing a tunneling connection to the relay device;

a client device management device for managing the client device in association with the relay device or the tunneling connection; and

10 a routing device for routing a connection, the connection from the Internet to the client device, through the tunneling connection to the relay device which is connected to the client device, based on management at the client device management device.

9. The server of Claim 8, further comprising:

15 a model identification section for determining if the client device is of a predetermined model and /or if the relay device is of a predetermined model; and

a command conversion section for converting a command to be sent to the client device to a command in a predetermined format for controlling the client device, based on results from the model identification section.

20 10. The method of Claim 9, wherein the server further comprises:

a model identification section for determining if the client device is of a predetermined model and /or if the relay device is of a predetermined model; and

25 a command conversion section for converting a command to be sent to the client device to a command in a predetermined format for controlling the client device, based on results from the model identification section.

11. The server of Claim 9, further comprising:

a communication session disconnection section for disconnecting communication sessions or limiting packet transmissions if the model identification section determines that the client device or the relay device is not of the predetermined model.

5 12. The server of Claim 8, wherein

the client device includes peripheral equipment, which is communicable with the relay device but cannot independently connect to the Internet.

13. The server of Claim 8, further comprising:

10 a network type identification section for determining if a first network environment connected to the client device and/or the relay device is of a predetermined type.

14. The server of Claim 13, further comprising:

15 a communication session disconnection section for disconnecting communication sessions or limiting packet transmissions if a private network environment connected to the client device or the relay device is determined not of the predetermined type.

15. The server of Claim 8, further comprising:

20 a state information obtaining section for obtaining at least one of an operation state, a usage state and location information of the client device and/or the relay device.